

**Remarks:**

By the present amendment claims 1-41 and 44 are cancelled; claims 42 and 43 have been amended; and new claims 45-48 have been added. Reconsideration of the rejections is respectfully requested. Claims 42-43 and 45-48 are pending.

The claims have been amended to more clearly define the invention. Support for the amendments is either apparent, or is as described below. Support for new claim 45 can be found in the specification at, for example, page 8, lines 26-33, and claim 21 as originally filed. Support for new claim 46 can be found in claim 20, as originally filed. Support for new claim 47, can be found in claim 22, as filed. Support for new claim 48 can be found in claim 21, as originally filed. No new matter is added.

**Claim Rejection under 35 U.S.C. §102(b)/103(a) - Baumann et al.**

Claims 1, 4-6, 8-23 and 42-44 stand rejected under 35 U.S.C. §102(e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Baumann et al. (U.S. Patent No. 6,555,088). In particular the Examiner asserts:

...Baumann et al. disclose a method for converting carbon monoxide with water to form hydrogen comprising passing the gas mixture over a shift catalyst for carbon monoxide conversion, wherein the shift catalyst may be platinum supported on an oxide support material selected from the group consisting of aluminum oxide, silicon dioxide, titanium dioxide, rare earth oxides and zeolites. (See column 7, line 60 - column 8, line 9.) Baumann et al. teach at column 8, lines 17-22 that the oxide support material is doped with a redox-active oxide of a metal selected from the group consisting of cerium, zirconium, titanium, vanadium, manganese and iron. Baumann et al. also disclose at column 4, lines 50-53 that the catalyst may comprise platinum together with copper as well as cerium oxide on finely divided aluminum oxide, and further disclose at column 4, lines 20-27 that the support material should have a specific surface of more than 10 m<sup>2</sup>/g. The catalyst of Baumann et al. would have a low-pyrophoricity, since Example 1 in column 6 of Baumann et al. discloses that the catalyst was prepared by impregnation.

The claims as amended particularly and distinctly define the subject matter of the matter of the invention. It is noted that the catalysts described in Baumann et al. are noble metal-based compositions, while Applicants' instant invention, as reflected in the amended claims, describe a copper-based composition. As such, the method of the instant invention can be conducted with

base metal catalysts that do not require platinum group metals or, more broadly, noble metals. This feature provides the instant method with a significant cost saving which is unlikely to be obtained by using the noble metal-based water-gas shift catalysts described in the cited reference.

Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. §102(e)/103(a) are respectfully requested.

*Claim Rejection under 35 U.S.C. §102(e)/103(a) - Korotkikh et al.*

Claims 1, 4-6, 8-10 and 44 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Korotkikh et al. (U.S. Patent No. 6,562,315). The Examiner noted that Korotkikh et al. disclose a process for carrying out the water-gas shift reaction, using a catalyst comprising aluminum oxide having a surface area of at least 10 m<sup>2</sup>/g, platinum as the catalytic agent and a promoter comprising one or more of cerium oxide, neodymium oxide, praseodymium oxide and iron oxide.

Without conceding the correctness of the rejection, Applicants have cancelled claims 1, 4-6, 8-10 and 44, thereby rendering the basis for the rejection moot. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. §102(e)/103(a) are respectfully requested.

*Claim Rejections under 35 U.S.C. §112, second paragraph*

Claims 1 and 4-6 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have cancelled claim 1 and 4-6, thereby rendering the basis for the rejection moot. Reconsideration of the rejection under 35 U.S.C. §112 is respectfully requested.

Closing Remarks

Applicants thank the Examiner for the Office Action and believe this response to be a full and complete response to such Office Action. Accordingly, favorable reconsideration in view of this response and allowance of the pending claims are earnestly solicited.

FEE DEFICIENCY

☒ If an extension of time is deemed required for consideration of this paper, please consider this paper to comprise a petition for such an extension of time; The Commissioner is hereby authorized to charge the fee for any such extension to Deposit Account No. 04-0480.

**and/or**

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Respectfully submitted,



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